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ILLINOIS COMMERCE COMMISSION

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Illinois Commerce Commission  
RAILROAD OVERPASS STRUCTURE OVER  
PATTERSON ROAD IN WILL COUNTY, ILLINOIS

MIDWEST GENERATION, LLC

v.

Union Pacific Railroad Company,  
Joliet Township of Will County, the  
State of Illinois, Department of  
Transportation

Docket No. TOZ-0001

Petition for Ratification of Railroad  
Overpass Structure over Patterson  
Road in Will County, Illinois

**PETITION FOR RATIFICATION OF  
RAILROAD OVERPASS STRUCTURE OVER  
PATTERSON ROAD IN WILL COUNTY, ILLINOIS**

Petitioner, Midwest Generation, LLC ("Midwest"), by its attorneys, pursuant to the Illinois Commercial Transportation Law, 220 ILCS 5/18c-1101, *et seq.*, hereby submits this Petition for Ratification of Railroad Overpass Structure over Patterson Road in Will County, Illinois, seeking relief for currently constrained rail access for coal deliveries to Midwest's Joliet Generating Station ("Joliet"). In support of this petition, Midwest states as follows:

1. Midwest is a limited liability company organized under the laws of the State of Delaware, with its principal place of business in Chicago, Illinois. On December 15, 1999, Midwest (through an affiliated entity) purchased substantially all of the non-nuclear generating assets of Commonwealth Edison Company ("ComEd"). Midwest operates 9,287 megawatts of fossil-fuel generating capacity in northern Illinois. Most of the electricity generated by Midwest is sold to ComEd and distributed by ComEd to wholesale and retail customers, the vast majority of whom are located in Illinois.

DOCKETED

2. Midwest's coal-fired generating stations, including Joliet, burn coal purchased from mines in the Powder River Basin in Wyoming and Montana ("PRB"). Joliet burns approximately 4.0 million tons of PRB coal annually. The coal burned at Joliet currently is delivered from mines in the PRB by Union Pacific Railroad Company ("UP") and Illinois Central Railroad Company ("IC") in coal unit trains pursuant to a rail transportation agreement. The IC delivery contract expires at the end of 2002; the UP contract expires at the end of 2011.

3. Under the existing track configuration serving Joliet, no railroad other than IC may provide coal deliveries to serve the generating station, unless permission is received from IC to operate over its track. Consequently, Joliet is captive to IC for deliveries of its required coal supply. On at least one occasion in the past year, this access constraint required Midwest to reduce output at Joliet. Overall, the generating station currently is operating at approximately 55 percent capacity, compared to Midwest's operational goal of more than 70 percent capacity. Midwest anticipates that continued growth in demand for electricity in northern Illinois, and the accompanying need for improved coal supply at Joliet, will exacerbate the inefficiencies caused by the constrained access for coal deliveries at the generating station. Midwest, therefore, requires a more efficient railroad track configuration to service Joliet.

4. To provide for more efficient coal deliveries to Joliet, Midwest desires to obtain access to the generating station from more than one railroad. To meet this goal, Midwest has devised plans for approximately 4,700 feet of new rail track through an industrial area, which would provide UP with direct access for coal deliveries to the generating station. As part of this proposed project, and the subject of this petition, Midwest has made preparations to build an overpass structure over Patterson Road near Joliet, Illinois, which is needed to service the planned rail track extension. Once the new rail track and overpass structure are completed,

Midwest anticipates that 100 percent of the coal unit train traffic into the generating station (approximately seven unit trains per week) will be via UP.

5. Midwest has hired E80 Plus Contractors ("E80"), a reputable engineering firm with experience in bridge design, to prepare plans for the proposed overpass structure over Patterson Road in accordance with the AREMA Manual for Railway Engineering and other applicable safety standards. (A Conceptual Bridge Design by E80, including a drawing of the bridge design concept, is attached hereto as Exhibit 1.) The estimated cost of this project, which Midwest would construct and own, is approximately \$550,000 to \$600,000. (See Ex. 1)

6. Midwest has submitted this petition to provide a procedural opportunity for the Commission to review the safety of the proposed overpass structure over Patterson Road under the standards that normally are applied to rail carriers in order to meet the paramount goal of ensuring that the public safety is protected. If the proposed overpass structure over Patterson Road is determined to be safe, Midwest respectfully requests that Commission issue an order to that effect.

7. Further, Midwest requests that the Commission address this matter on an expedited basis, so that Midwest may eliminate existing coal delivery access constraints at Joliet without delay and well prior to the expiration of its current transportation agreement.

8. All notices for this proceeding should be sent to:

R. Michael Bales  
Director, Fuels  
Midwest Generation, LLC  
One Financial Place, Suite 3500  
440 South LaSalle Street  
Chicago, IL 60605  
e-mail: mbales@mwgen.com

John E. Rooney  
Thomas A. Andreoli  
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233 South Wacker Drive  
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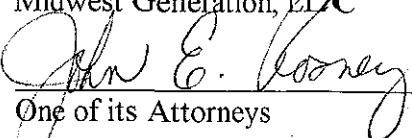
WHEREFORE, for the reasons set forth herein, Midwest respectfully requests that the Commission request that its Staff review the safety of the proposed overpass structure over Patterson Road associated with coal delivery to Joliet Station, and if the Staff determines that the proposed bridge has been designed in accordance with applicable safety standards, expeditiously issue an order ratifying the safety of said bridge.

Dated: January 3, 2002

Respectfully Submitted,

Midwest Generation, LLC

By:

  
One of its Attorneys

John E. Rooney  
Thomas A. Andreoli  
Sonnenschein Nath & Rosenthal  
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8000 Sears Tower  
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**PROOF OF SERVICE**

I, John R. Rooney, hereby certify that I caused a copy of the foregoing Petition for Ratification of Railroad Overpass Structure over Patterson Road in Will County, Illinois to be served upon the persons listed below by inserting a copy of the same in the U.S. mail, proper postage prepaid, at 233 S. Wacker Drive, Chicago, Illinois 60606, on this 3rd day of January, 2002.

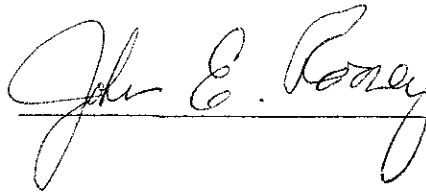
Robert S. Berry  
Railroad Safety Specialist  
Illinois Commerce Commission  
527 East Capitol Avenue  
Springfield, IL 62701

Union Pacific Railroad Company  
Ronald J. Cuchna  
General Solicitor  
Attn: Mark Shumate  
101 North Wacker Drive, Suite 1920  
Chicago, IL 60606

James C. Slifer  
Director - Division of Highways  
Illinois Department of Transportation  
2300 South Dirksen Parkway -  
Room 300  
Springfield, IL 62764

Union Pacific Railroad Company  
Dave McKernan  
210 North 13<sup>th</sup> Street, Room 1612  
St. Louis, MO 63103-2388

CT Corporation System  
208 S. LaSalle Street  
Chicago, IL 60604

  
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**Paterson Road**  
**CONCEPTUAL BRIDGE DESIGN**  
*including*  
*Construction Cost Estimates*

*for*  
**Edison Mission Energy Fuel Services**  
Attn: Larry Siler  
One Financial Place  
440 South LaSalle Street  
Suite 3500  
Chicago, IL 60605

600 BASSETT ST.  
DEFOREST, WI 53532  
PH: (608) 846-1880  
FAX: (608) 846-2225



# Paterson Road

## CONCEPTUAL BRIDGE DESIGN

### ■ Introduction

On the 21<sup>st</sup> of September, 2001, E80 Plus Constructors was contracted by Southern Coal Handling Co., Inc. to create a conceptual bridge design to carry a proposed extension of the Joliet #9 track over Paterson Road in Joliet, Illinois. In addition to conceptual design, SCHC requested an engineer's estimate for the construction of the proposed design. The requirements established by SCHC for the proposed structure included that the bridge be designed in accordance to the AREMA Manual for Railway Engineering, have a ballast deck, and should provide overhead clearance equal to or greater than the existing bridge over Paterson Road.

### ■ Summary

The purpose of the conceptual design is to assist SCHC and their client evaluate the viability of the proposed track extension. To fulfill this purpose, E80 Plus evaluated several possible designs on the basis of material cost, ease of construction, and quality of the final product. The design ultimately selected utilizes a single span, rolled steel beam bridge resting on two cast-in-place concrete abutments bearing directly on bedrock. The construction cost of the bridge, including all material, labor and equipment necessary to complete the bridge as detailed, is estimated to be in the range of \$550,000 to \$600,000. In addition to the estimated construction cost, the design cost for the structure is estimated to be in the range of \$43,500 to \$47,000. This estimated cost for design does not include the costs for permitting or geo-technical studies that may be necessary.

### ■ Design Concept

#### *Design Drawings:*

A drawing of the bridge design concept is included with this report for reference.

#### *Design Assumptions:*

During the design process, some assumptions had to be made to address certain unknown factors. Every construction project presents a series of unknowns; most of which have little affect on the work, but a few unknowns can have major impacts on the final configuration and cost of the structure. E80 Plus Constructors has made the following assumptions regarding certain key elements of the site, existing structure, and the construction of the proposed structure.

#### Sub-surface Conditions:

Based on a survey of the site and discussions with individuals familiar with the geology of the area, it was assumed that bedrock would be found close to the surface (< 8 feet). If soil borings show that the depth to bedrock is greater than ~ 8 feet, the abutments should be redesigned using driven piles in lieu of a spread footer. The cost of a driven pile abutment may be more than a spread footing abutment, however, the amount of increase is difficult to estimate without soil boring data.

#### Utilities:

The assumption was made that no utility lines such as natural gas pipelines or fiber optic cables run parallel to the existing ROW in the area where the bridge is to be built. If a major utility line is located in the area directly under the proposed abutments, the line will need to be relocated or the structure will have to be redesigned.

#### Rail Operations:

During the construction of the proposed bridge, it was assumed that the track directly adjacent to the proposed structure would be taken out of service. All other tracks would remain in service during construction with the proper Roadway Worker protection in effect for the men and equipment working on the proposed bridge. If the adjacent track cannot be taken out of service, there will be significant additional costs for delay of construction caused by trains and the cost to construct live load shoring for the excavation adjacent to the track.

#### Vehicle Traffic:

Preferably, the road under the bridge should be closed for construction. However, for design and estimating, it was assumed that one lane could be closed and traffic directed through the construction area using either traffic lights or flaggers. If the authority in charge of the roadway will not allow one lane to be closed for construction, the foundation will need to be redesigned and there may be an increase in the construction costs.

#### *Design Specification and Loads:*

The design was created in accordance to the 1999 AREMA Manual of Railway Engineering, Chapters 8 and 15. The design live load was a Cooper E80 Loading with impact reduced 10% for a ballast deck structure.

#### *Proposed Bridge Description:*

The proposed bridge will consist of a rolled beam span resting on cast-in-place abutments bearing directly on bedrock.



The superstructure of the bridge shall consist of four lines of 33' long W27x161 wide flange beams braced with W21x50 diaphragms connected to the main beams with clip angles and high strength bolts. The beams and the deck will be set on a skew matching the roadway. The bearings for the main beams will consist of plain sole and masonry plates resting on a 1/2" reinforced elastomeric pad to reduce transfer of vibration and impact loads.

The deck of the bridge will consist of a 14' wide cast-in-place concrete ballast through cast directly on the main beams. The deck will not be designed to contribute to the bending strength of the beams. The deck will be 13" thick at the centerline of the track and will taper down to 10 1/2" thick on the outside edges. An 18" tall by ~10" wide ballast retainer will be cast integral with the deck on both sides of the bridge. The deck will be waterproofed using a butyl rubber membrane protected by two courses of asphalt planking. Deck drains will be cast through the ballast retainers on a 10' spacing to provide even drainage.

The substructure of the bridge shall consist of two cast-in-place, reinforced concrete abutments with spread footings to transfer load directly onto the bedrock. All elements of the substructure will be reinforced to withstand the axial, longitudinal, or earth pressure loads to which the element is subjected. Dowels made of #8 rebar will be used to anchor the new abutment to the bedrock and to the existing abutment. The geometry of the abutments will vary due to the skew of the roadway and the layout of the existing bridge.

#### ■ Engineer's Estimate:

The engineer's estimate is based on the following scope. The work items in this scope are general in nature and are in an approximate order, however, this scope does not represent the only or the best method to prosecute the work. The actual scope used by the successful contractor may vary greatly from the scope given in this report.

##### 1. Prep Work:

- a) Mobilize men, material, and equipment and set-up at site.
- b) Set-up stop lights for traffic control.

##### 2. Abutment Work:

- a) Drive sheet piling off ends of existing bridge for excavation.
- b) Excavate embankment behind existing wingwalls.
- c) Wire saw proposed interface with existing abutments and demolish existing wingwalls.
- d) Sawcut and remove roadway in the area of the proposed bridge.
- e) Excavate for abutments and then install temporary fill for roadway.

- f) Prepare bedrock and install #8 dowels.
  - g) Form, install reinforcing for, and pour footers.
  - h) Prepare interface with existing abutment and install #8 dowels.
  - i) Form, install reinforcing for, and pour abutment shafts.
  - j) Form, install reinforcing for, and pour headwalls and wingwalls.
  - k) Apply mastic on face of abutment to be filled.
  - l) Apply damp-proofing on exposed faces of the abutment.
3. Superstructure Work:
- a) Set main W27x161 beams.
  - b) Install scaffolding under span to access steel for installation of bracing.
  - c) Install diaphragm bracing and anchor bolts for span.
  - d) Install formwork for concrete deck.
  - e) Install rebar and pour concrete for deck.
  - f) Apply damp-proofing to faces and the underside of the deck.
  - g) Apply butyl rubber water proofing and place two layers of asphalt protection planking.
4. Miscellaneous Roadbed and Roadway Work:
- a) Backfill and compact sub-ballast outward 20' from the ends of the bridge.
  - b) Remove sheet piling.
  - c) Install ballast across span and outward 20' from each end of the bridge.
  - d) Re-pave the section of roadway removed for the abutment construction.
  - e) Install guard railing and signage for the roadway.
5. Demobilize:
- a) Tear-down equipment, clean-up site and demobilize.

The engineer's estimate has been divided into two amounts. The first amount is the estimated labor and equipment cost for the project and the second amount is for the estimated material cost for the project

**Estimated Labor & Equipment Cost:**

The estimated cost to furnish the labor and equipment required to complete this project including, but not limited to, laborers, crane operators, superintendents, surveyors, engineers, office staff, cranes, compressors, generators, rigging, carpentry tools, steel tools, concrete finishing equipment, surveying equipment, etc is in the range of:

**\$395,000 to \$433,000**

**Material Cost:**

The estimated cost to furnish the material required to complete this project including, but not limited to, structural steel, bolts, bearings, reinforcing steel, concrete, form material, sub-ballast, ballast, sheet piling, signs, mastic, waterproofing, damp proofing, etc is in the range of:

**\$155,000 to \$167,000**

**■ Estimated Design Cost:**

The cost to design the structure described in this report to AREMA standards, including all design calculations, drawings, specifications, and bid documents is in the range of \$43,500 to \$47,000. If a formal proposal for design services is desired, please contact E80 Plus Constructors, LLC.